

Page 1

Setup Start



Stop

Reject

Number

Cust Item ID:

Customer:

Draw

Number

Date: 101-18 Tooling:

Accept

Date:

Accept

Qty

Start Stop

Sequence ID/

Purchasing

Purchasing

Work Center ID

Date:

SPC (Y/N):

Set Up/

Run Hours

Date:

Draw

Rev.

Plan

Code

Reject Qty

Run

Insp. Stamp

Description **Revision Nbr Draw Nbr** D3997 Α

100

0.00

Manufacture as per Dwg D3997 Possible Supplier:Studio Lettrage 0.00

Material release note required

Pl 10-148

110

Receive & Inspect for Damage & Mat'l Certs

0.00

Packaging

Memo

Memo

Operation

0.00

Packaging

120

QC6- Inspect dimensions to drawing

2>) voloc/21

Memo

Quality Control

Dail Noi Oopaoo Eta	Dart	Aero	space	Ltd
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W/O:			W	ORK ORDER CHANG	ES			·	1	*
DATE	STEP	PRC	OCEDURE CH	ANGE	В	у	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
	<u> </u>		1 32000					<u> </u>		
Part No		PAR #:								
	R	esolution:	Dispositi	on:	QA: N/	C Clo	sed:		Date: _	
NCR:			WORK ORE	DER NON-CONFORMA	ANCE (I	VCR)				
DATE	STEP	Description of NC			ion B	! O	Verific	ation	Approval	Approval
DAIL	O'L'	Section A	Initial Chief Eng	Action Description Chief Eng		ign & Date	Secti	on C	Chief Eng	QC Inspector
							1		1	i

January 18, 2010 10:47:48 AM

Page 2

Item ID:

D3997-27

Accept

Setup Start

Stop



Revision ID:

Item Name: **Start Date:**

Placard

1/18/10

QC:

Start Qty: 10.00

Req'd Qty: 10.00

Cust Item ID:

Customer:

Reference:

Required Date: 1/25/10

Date:

Tooling:

Date:

Run

Start

Approvals:

Process Plan:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID

130

Packaging

Packaging

Operation Description

Identify as per dwg & Stock Location (O)

Memo

Set Up/ **Run Hours**

0.00

0.00

Draw Number

Draw

Rev.

Plan Code

Accept Qty

Reject Qty

Reject Number Stamp

Insp.

140

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/01/22 Aff MF 10-1-21

Dart A	erospac	e Ltd
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Dart Ae	rospace	Ltd						3
W/O:			WO	RK ORDER CHANGE	ES		1	•
DATE	STEP	PRO	OCEDURE CHAI	NGE	Ву	Date Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	:	PAR #:	Fault Cate	gory:	NCR: Yes	No DQA:	Date: _	
	Re	esolution:	Disposition	1:	QA: N/C Clo	sed:	Date: _	
NCR:			WORK ORDE	R NON-CONFORMA	NCE (NCR))		***
5.475	0750	Description of NC		Corrective Action Section	on B	Verification	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector

	GCCHOTTA	Chief Eng	Chief Eng	Date	Gection C	Office Ling	QO IIISPECIOI
:		•					

Picklist Print

January 18, 2010 10:47:52 AM

Work Order ID: 55415

Parent Item: D3997-27

Parent Item Name:

Placard

IPP rev A 10.01.12 new issue Prelim EC verified by:DD

Purchased

Start Date: 1/18/10

Required Date: 1/25/10

Start Qty: 10.00

Required Qty: 10.00

Component Item ID/ Item Name

Replacement Mfg/ Item ID

Purch

No

Primary Item Location Last Location

Route Seq ID Unit of Qty on Measure Hand

Each

0.0000

Remaining **Qty** Qty To Pick Issued Date Issued

Status

Page 1

D3997-27P

Comments:

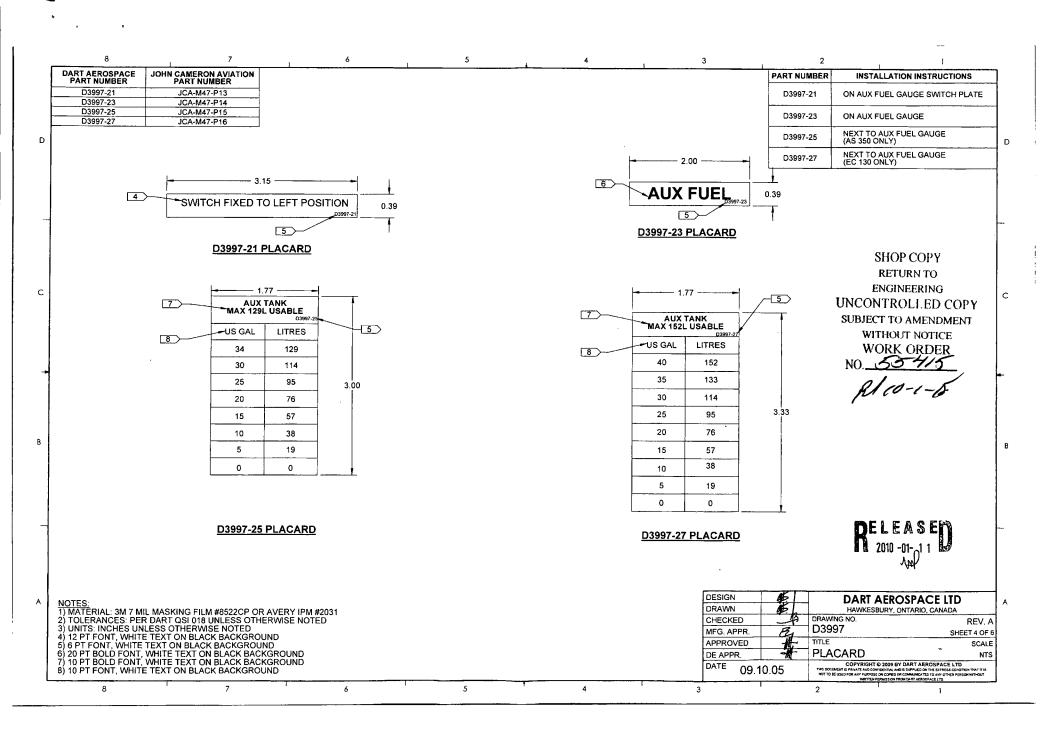
Placard

10.0000

MF 10-1-21

Dart Aero	space	Ltd
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W/O:			WC	ORK ORDER CHANG	ES			,	
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	•	PAR #:	Fault Cate	gory:	_ NCR: Yes	No DQ	A:	Date: _	
	Res	solution:	Disposition	n:	QA: N/C (Closed:		Date: _	
NCR:		,	WORK ORD	ER NON-CONFORM	ANCE (NC	R)			
DATE	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Section Description Chief Eng	tion B Sign Date	& Sect	cation tion C	Approval Chief Eng	Approval QC Inspector



Dart Aerospace Ltd

W/O:			WO	RK ORDER CHANG	GES	74			ŧ	
DATE	STEP	PRO	OCEDURE CHAN	IGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
							1			
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Part No		PAR #:	Fault Categ	ory:	_ NCR	: Yes N	lo DQA	:	_ Date:	
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NCR:			WORK ORDE	R NON-CONFORM	ANCE	(NCR)				
DATE	STEP	Description of NC			ction B		Verifica	ation	Approval	Approval
	JIEF	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Sectio	n C	Chief Eng	QC Inspector
									_	



210 MAIN W., HAWKESBURY, ONT. K6A 2H6

Tel.: 613 632-2001 Fax: 613 632-9491 www.studiolettrage.com **INVOICE / FACTURE**

No.:

13302

DATE:

01/20/2010

PAGE

1 of 1

Re: Quote No. 8181

VENDU À: SOLD TO:

K6A 1K7

LIVRÉ À: SHIPPED TO:

Dart Aerospace Ltd 1270 Aberdeen Hawkesbury, Ontario

Dart Aerospace Ltd Hawkesbury, Ontario

ITEM ARTICLE	QTY QYÉ	UNIT UNITÉ	DESCRIPTION	GST TPS	PST TVP	UNIT PRICE PRIX UNITÉ	AMOUNT MONTANT
	10 10 10 10 10 10 10 10 10 10	לוכל לול לו אל לי ילאי	set up for labels D3997 11P D3997 13P D3997 15P D3997 19P D3997 29P D3997 29P D3997 29P D3997 31P D3997 31P D3997 31P D3997 31P D3997 31P D3997 31P D3997 31P D3997 31P D3997 31P D3997 31P D3997 31P D3997 31P D3	G		275.00	660.00 275.00 46.75
Studio de Lettrage PO 11156 Sold By	GST: #8690	34678RP901				TOTAL	981.75



PRODUCT DATA BULLETIN

Product Data Bulletin: A5-O Avery Graphics™ A5 Opaque 5-year INTERMEDIATE calendered vinyl film Dated: 10/3/02

Avery Graphics A5 Opaque intermediate films are flexible, high-gloss calendered vinyls designed for use on computer sign cutting equipment. This construction provides excellent cutting, weeding and transferring characteristics for signage applications.

Application information can be found in the Avery Graphics Application Guide.

For surface preparation, converting and printing, and application and removal instructions, please refer to the Avery Graphics Instructional Bulletin.

- Construction: Face Film: 3.2 mils opaque medium gloss intermediate calendered vinyl film
- Adhesive: 1.0 mil clear acrylic permanent solvent pressure-sensitive adhesive
- Liner: 78# bleached white kraft

The following information on physical and chemical characteristics is based upon tests believed to be reliable. The values are intended only as a source of information. They are given without guarantee and do not constitute a warranty. The purchaser should independently determine, prior to use, the suitability of this material for his/her specific purpose. (Data represents averages and is not intended for use as a specification).

- Outdoor durability: 5 years when properly processed and applied (vertical exposure, unprinted film)**
- Application surface contours: Flat and simple curves
- Minimum surface and air application temperature: +50° F (10° C)
- Service Temperature Range: -40° F to +180° F (-40° C to 82° C) (Reasonable range of temperatures which would be expected under normal environmental time and temperature conditions)
- Typical Chemical Resistance: Resistant to most mild acids, alkalis and salt solutions. See instructional bulletin for recommendations on cleaning.
- Shelf Life: One year whon stored at the following temperatures and humidity conditions: 68°-77° F (20° - 25° C) and 50±5% R. H.
- Typical Adhesion Values: 180° Peels

1 week 24 hrs Substrate 5.1 lbs/in 4.4 lbs/in Stainless Steel 5.3 lbs/in 4.7 lbs/in NOTE: Tested per ASTMD 1000. Always pre-test your specific substrate prior to actual application.

- Reflectivity: NA
- Typical Gloss*: 70 at 60°

Product Bulletin 8522

3M

Release F, Effective January 2003
Black bar in margin indicates a change

Scotchcal [™] Opaque Imaging Media 8522

Description

This media is specially formulated to dry quickly after printing. Production of outdoor weatherable and long-term indoor durable graphics is now easier than ever. Its changeable adhesive allows easy removal for up to one year.

Advantages

- Optimized for use with selected Epson Stylus Proprinters and Epson Archival inks.
- Optimized for use with selected HP DesignJet Printers and HP DesignJet Ink System UV or HP83UV Color Ink System
- For making opaque, laminated graphics that are outdoor weatherable and long-term indoor durable
- Media:
 - For opaque (reflective) graphics
 - Changeable, easy to remove from warranted substrates up to 1 year later
 - Dries quickly after printing so the overlaminate can be applied almost immediately
 - Low slippage paper liner for superior tiling
- Overlaminates:
 - Provide additional UV (ultraviolet) and physical protection for making weatherable finished graphics
 - Available in luster and matte gloss
 - Adhesive allows for heat-assisted or cold-temperature lamination

Applications and Uses

3M[™] Scotchcal [™] Changeable Opaque Imaging Media 8522 is intended only for ink jet printing and for use with the listed Compatible Products and Equipment and the following applications. Any other application is NOT warranted by 3M or covered by the worldwide 3M [™] MCS [™] Warranty unless 3M gives its prior written approval for the application.

- First surface images (the image is on top of the film) for opaque posters and signs, including:
 - Graphics for vans, personal vehicles, trucks and buses
 - Novelty posters
 - Retail and point-of-purchase displays
 - Information graphics such as maps and directories
 - Entertainment promotions in museums, zoos, parks, theatres, sports venues
 - Education and presentation graphics

- Legal and courtroom exhibits
- For flat or simple curved surfaces, with or without rivets, used in vertical (± 10°) applications

Limitations of End Uses

The following uses and applications are specifically NOT warranted.

- Fleet applications in areas that use salt for winter road maintenance
- Application to non-warranted substrates, including wallhoard
- · Applications subjected to gasoline vapors or spills
- Application to corrugated or highly irregular surfaces or sharply raised areas
- Graphics applied to stainless steel, including stainless steel vehicles
- On flat surfaces with rivets, tenting of 4 to 10 mm around rivets may be expected; rivets may be cut around to eliminate tenting.

Note: Standard ink jet technology is water based. Water-based chemistry is susceptible to the extremes of heat and humidity. This is a factor in most product constructions on the market. Read the Fabrication, Shelf Life and Storage sections in this bulletin. Staying in the middle of these ranges always provides optimum performance.

Compatible Products and Equipment

Thermal Ink Jet Printing Systems

- Epson Stylus Pro 9500, Stylus Pro 10000 printer
 - Epson Archival Inks
- Epson Stylus Pro 10600 printer
 - Epson Archival Inks
- HP DesignJet Printers 2000 and 3000 series
 - HP DesignJet Ink System UV (pigment-based ink)
- HP DesignJet Printers 5000 series
 - HP83UV Color Ink System

Overlaminates (required)

- 3M[™] Luster Overlaminate 8519 (semi-gloss)
- 3M[™] Matte Overlaminate 8520

Note: For the full product names of the 3M products listed on this page, please see page 1.

Warranted Substrates

Media 8522 is warranted for use on the following rigid substrates.

Some substrates may "out-gas", resulting in tiny bubbles throughout the surface of the graphic. For maximum performance, be sure the substrate you select is properly cleaned and prepared as recommended by the manufacturer. See Instruction Bulletin 5.1 for additional information.

- Alodine (anodized aluminum)
- Automotive panels (automotive painted steel)
- Fruehauf (painted aluminum)
- FRP (fiberglass reinforced plywood)
- Imron® (polyurethane-painted metal panel)
- Sintra * board

Test and Approve Non-warranted Substrates Before Use

Media 8522 is not warranted for any substrate other than those listed above. If you want to use it for other substrates. 3M recommends that you test and approve the media for both adhesion and removal characteristics.

Characteristics

Characteristic	Description
Media	7 mil, white, opaque graphic film
Liner	Low-slippage, lay flat paper
Adhesive	Changeable, pressure sensitive
Thickness (media and adhesive)	7.5 to 8 mil (nominal)
Application substrates	See Warranted Substrates, above
Application surfaces	Flat or simple curved surfaces, with or without rivets, used in vertical (± 10°) applications (no corrugations)
Application temperature range	28° to 110°F (-2° to 43°C) (air and surface)
Roll sizes	36" x 45 feet (914 mm x 13.5 m) 54" x 45 feet (1372 mm x 13.5 m)

How to Become a 3M Ink Jet Registered Fabricator

Only 3M Thermal Ink Jet Registered Fabricators are eligible to offer 3M MCS warranted graphics. In order to become certified, a fabricator must complete the requirements as specified in the 3M Ink Jet Graphics Registered Fabricator Reference Manual located on the 3M website at www. scotchprint.com

Effective Performance Life

To obtain the warranty given below, the graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3. Also see the section, Removability.

Warranted Durability

Media 8522	Epson Pr	Epson Printers HP Printers					
with Overlaminate 8519 or 8520	Outdoor	Indoor	Outdoor	Indoor			
Applied to Warranted Substrates	2 years	5 years	3 years	5 years			

Removability

Imaging media 8522 is removable from warranted substrates for I year without the aid of chemical strippers or accessories. Refer to Instruction Bulletin 4.23 for additional information.

Fabrication

Graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3.

See Instruction Bulletin 4.23 for detailed fabrication, printing and mounting information.

Graphic Construction Options

Opaque (Reflective) Graphics

Opaque graphics made with imaging media 8522 require an overlaminate and an opaque substrate.

Viewer/Light Source Overlaminate 8519, 8520 Adhesive on bottom Imaging Media 8522 Image on top; adhesive on bottom Opaque Substrate

Note: For the full product names of the 3M products listed on this page, please see page 1.

Shelf Life and Storage

- 3M[™] Scotchcal[™] Changeable Opaque Imaging Media 8522 has a shelf life of one year.
- Storage conditions (new and partially used rolls). For optimum performance, use the middle of these ranges:
 - Original packaging, including plastic wrap
 - Relative humidity of 20% to 80%
 - Temperature of 33° to 104°F (0° to 40°C)
 - Away from direct sunlight
- Do not stack unprotected rolls or lay sharp or heavy objects on them.

Health and Safety

∧ Caution

When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.

To obtain MSDS sheets for 3M products:

- By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.
- Electronically, visit us at http://www.3M.com/msds.
- By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

Warranty and Limited Remedies

3M ™ MCS ™ Warranty for Graphics Produced on HP DesignJet Printers and Epson Stylus Pro Printers

The following is made in lieu of all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose: We warrant graphics produced by a 3M Ink Jet Registered Fabricator made with imaging media 8522, printed on an approved HP thermal ink jet printer according to HP's recommendations or Epson Stylus Pro printer according to Epson's recommendations, overlaminated with 8519 or 8520, and applied to a Warranted Substrate according to 3M's recommendations. These

graphics are covered against failure caused by ultraviolet light, temperature extremes, pollution, and other elements.

If a graphic fails to perform in accordance with 3M product specifications within this time frame, 3M will replace the materials at no charge. These remedies are exclusive. In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor charges.

3M Related Literature

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our Web site at www.scotchprint.com, or order them via our Faxon-Demand (FOD) system. Call one of these phone numbers to order the desired bulletins, and specify the FOD document number provided in the chart.

United States or Canada: 1-800-364-0768

International: 1-651-732-6506 Subject	Bulletin No.	FOD No.
Product Bulletins		
3M [™] Scotchcal [™] Overlaminate 8519 and 8520	8519/8520	4524
Instruction Bulletins		
Making thermal ink jet graphics	4.23	6523
Application, substrate selection, preparation and substrate-specific application techniques	5.1	7001
Warranties		1
Worldwide 3M ™ MCS ™ Warranty Packet (includes all Commercial Graphics MCS Warranties)		9503
Worldwide 3M™ MCS™ Warranty Overview-Folder		9504

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HP and DesignJet are tradenames of Hewlett Packard.
Sintra is a trademark of Swiss Aluminum Ud.
Imnon is a registered trademark of DuPont in the United States

Bulletin Change Summary

The Epson Stylus Pro Printers 9500, 10000 10600, and Epson Archival Inks have been added to this bulletin. Additional changes resulting from this addition are marked with black bars in the margin.

3M

Commercial Graphics Division 3M Center. Building 220-6W-06 PO Box 33220 St. Paul, MN 55133-3220 USA General Info. 1-800-374-6772 Technical Info. 1-800-328-3908 3M Canada P.O. Box 5757 London, Ontario Canada N6A 4T1 1-800-265-1840 Fax 519-452-6245

Fax 1-651-736-4233 Fax-on-Demand 1-800-364-0768 US/Canada or 1-651-732-6506 International Fax-on-Demand document: 4506 www.scotchprint.com 3M México, S.A. de C.V.

Av. Santa Fe No. 55 Col. Santa Fe, Del. Alvaro Obregón México, D.F. 01210 52-55-52-70-04-00 Fax 52-55-52-70-22-77 3M Puerto Rico, Inc. Puerto Rico Industrial Park P.O. Box 100 Carolina, PR (00986-0100 787-620-3000 Fax 787-750-3035

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